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STATE OF IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

Actuarial Valuation Report as of July 1, 2011

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Cavanaugh Macdonald
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October 10, 2011

Board of Trustees
Iowa Peace Officers' Retirement, Accident
and Disability System
215 East 7th Street
Des Moines, IA 50319

Dear Members of the Board:

In this report are submitted the results of the annual valuation of the assets and liabilities of the Iowa Peace Officers' Retirement, Accident and Disability System prepared as of July 1, 2011. The purpose of this report is to provide a summary of the funded status of the System as of July 1, 2011, to provide the Annual Required Contribution (ARC) and the accounting information under Governmental Accounting Standards Board Statements No. 25 and 27 (GASB 25 and 27). While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The promised benefits of the System are included in the actuarially calculated contribution rates which are developed using the Entry Age Normal cost method. An asset smoothing method is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability that is being amortized over a closed 30 year period beginning July 1, 2008 as a level percentage of pay. The assumptions recommended by the actuary and adopted by the Board are, in the aggregate, reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund and meet the parameters for the disclosures under GASB 25 and 27.

While this is not the first valuation report prepared by Cavanaugh Macdonald Consulting LLC, it is the first valuation prepared using the Cavanaugh Macdonald valuation software. The July 1, 2010 valuation results were prepared using Milliman's proprietary valuation software. As part of our transition work, we replicated the July 1, 2010 actuarial valuation. Results were well within acceptable limits, but there were some small differences in the key valuation results. The normal cost rate at July 1, 2010, as determined using CMC's valuation software, was 24.82% versus 25.29% shown in the July 1, 2010 valuation report. The actuarial accrued liability, calculated using CMC's valuation software, was $439 million compared to $433 million in the July 1, 2010 valuation report. These differences are neither unusual nor significant. It is very common for differences in valuation results to occur due to the use of different pension valuation software.

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We have prepared the Schedule of Funding Progress and Trend Information for the System, which are found in Section 5 of the report. All historical information that references a valuation date prior to July 1, 2010 was prepared by the prior actuarial firm.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries and have experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Actuarial computations presented in this report under GASB Statements No. 25 and 27 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the plan provisions described in Appendix B of this report, and of GASB Statements No. 25 and 27. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

We respectfully submit the following report and look forward to discussing it with you.

Patrice Beckham

Brent A. Banister

Patrice A. Beckham, FSA, EA, FCA, MAAA
Consulting Actuary

Brent A. Banister, PhD, FSA, EA, FCA, MAAA
Senior Actuary

Purpose of the Report

This report presents the results of the July 1, 2011 actuarial valuation of the Iowa Peace Officers' Retirement, Accident and Disability System (PORS). The primary purposes of performing the valuation are as follows:

- to determine the normal contribution rate payable by the State under Chapter 97A.8(1b) of the Code of Iowa;
- to satisfy the reporting requirements under Chapter 97A.8 of the Code of Iowa;
- to disclose asset and liability measures indicating the current funded status of the System as of the valuation date;
- to analyze and report on trends in System contributions, assets, and liabilities over the past several years; and
- to provide financial reporting information in accordance with Statements No. 25 and 27 of the Governmental Accounting Standards Board.

While this is not the first valuation report prepared by Cavanaugh Macdonald Consulting LLC, it is the first valuation prepared using the Cavanaugh Macdonald valuation software. The July 1, 2010 valuation results were actually developed using Milliman's proprietary valuation software. As part of our transition work, we replicated the July 1, 2010 actuarial valuation. Results were well within acceptable limits, but there were some small differences in the key valuation results. The normal cost rate at July 1, 2010, as determined using CMC's valuation software, was 24.82% versus 25.29% shown in the July 1, 2010 valuation report. The actuarial accrued liability, calculated using CMC's valuation software, was $439 million compared to $433 million in the July 1, 2010 valuation report. These differences are neither unusual nor significant. It is very common for differences in valuation results to occur due to the use of different pension valuation software.

The valuation results provide a "snapshot" view of the System's financial condition on July 1, 2011. The 2011 valuation is based on the same actuarial assumptions and methods as last year's valuation. However, as indicated above, different valuation software was used to prepare the current valuation. The unfunded actuarial accrued liability increased from July 1, 2010 to July 1, 2011, indicating overall unfavorable experience for FY 2011. A more detailed discussion of actual experience is included later in this section of the report.

The experience of both the System's assets and liabilities impacts the actuarial contribution rate. Experience which is more favorable than anticipated, based on actuarial assumptions, will generally lower the UAAL and the actuarial contribution rate and experience less favorable than expected will generally increase the UAAL and the actuarial contribution rate. The state's actuarial contribution rate increased from 36.03% in last year's valuation to 38.69% this year, based on a member contribution rate of 9.85% for FY2012. The actuarial contribution rate exceeds the State's appropriated contribution rate for FY2012 of 25% by 13.69%. Several factors impacted the actuarial contribution rate (note that the lower-than-expected investment return had the greatest impact):

- Due to the magnitude of the unrecognized loss from FY 2009, the return on the actuarial value of assets was below the expected rate (2.5% versus assumed rate of 8.0%). This increased the unfunded actuarial accrued liability (UAAL) and the actuarial contribution rate.
- Actual contributions below the full actuarial contribution rate increased the contribution rate.
- Other actuarial experience was unfavorable, which increased the unfunded actuarial accrued liability and increased the contribution rate.

The state's appropriated contribution rate has been lower than the actuarial contribution rate for the last decade, which has resulted in an increase in the UAAL and a corresponding increase in the actuarial contribution rate. With the changes in the law passed by the 2010 legislature, the statutory contribution rate for the state will rise 2% per year until it reaches a maximum of 37% of pay. In addition, the state is making supplemental contributions of $5 million per year beginning July 1, 2012. This supplemental contribution represents about 10% of payroll in the first fiscal year. These changes in the state's contribution, along with the increase in the member contribution rate, should significantly increase the System's long term funding. If all assumptions are met in the future, the System should move toward fully funded status over the next 25 years.

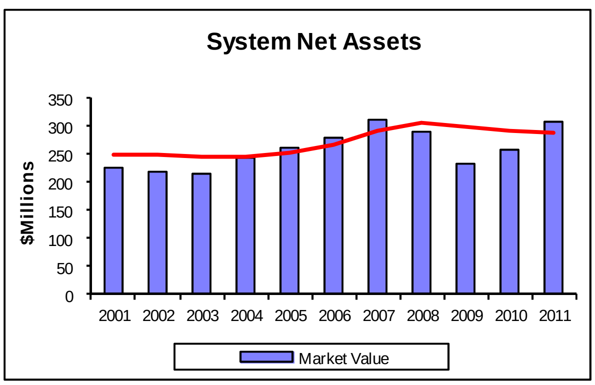
<u>Assets</u>

As of July 1, 2011, the System had total funds, measured on a market value basis, of $308,607,733. This was an increase of $51,733,960 from last year's market value of $256,873,773. The market value of assets is not used directly in the calculation of the actuarial contribution rate. The System uses an asset valuation method to smooth the effects of market fluctuations. The actuarial value of assets spreads the difference between the actual return and the expected return (based on the actuarial assumption) evenly over four years. See Tables 3 and 4 for a detailed development of the actuarial value of assets. The components of the change in the asset values are shown in the following table:

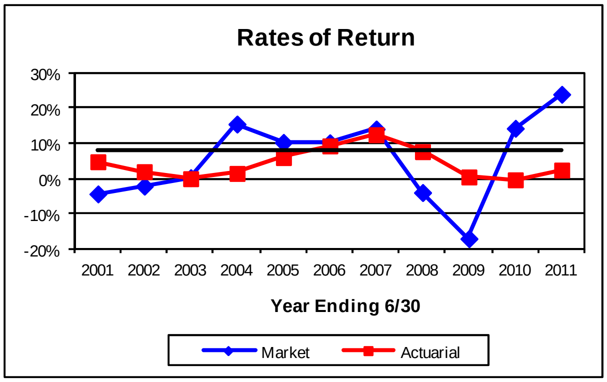
	Market Value	Actuarial Value
Net Assets, July 1, 2010	$256,873,773	$290,558,596
• Employer and Member Contributions	13,398,058	13,398,058
• Benefit Payments	(22,253,857)	(22,253,857)
• Administrative Expenses	(116,987)	(116,987)
• Investment Income	60,706,746	7,265,544
Net Assets, July 1, 2011	$308,607,733	$288,851,354

The dollar weighted rate of return measured on the market value of assets, net of expenses, was approximately 24.1%. Measured on the actuarial value of assets the rate of return was 2.5%, resulting in an actuarial loss of $16 million.

The market value of assets now exceeds the actuarial value of assets, i.e. there is a $20 million deferred (unrecognized) investment gain. Absent unfavorable investment experience in future years to offset the recognition of the deferred gain, it will increase the System's funding as it is reflected through the asset smoothing method over the next three years.



An asset smoothing method was implemented with the 2001 valuation. Actual investment performance below the 8% assumption resulted in the actuarial value of assets exceeding the market value in 2001 and 2003. Strong investment performance from 2004 to 2007 and again in 2011 resulted in the market value of assets exceeding the actuarial value in those years. For the 2008 to 2010 valuations, the actuarial value of assets exceeded the market value of assets.



Rates of return on the market value of assets are very volatile. The return on the actuarial value of assets (first implemented in 2001) is less volatile, illustrating the advantage of using an asset smoothing method.

System Liabilities

The actuarial accrued liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and asset values at the same date is referred to as the unfunded actuarial accrued liability (UAAL). The unfunded actuarial accrued liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial accrued liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and methods will also impact the total actuarial accrued liability (AAL) and the unfunded portion thereof.

The unfunded actuarial accrued liability as of July 1, 2011 is as follows:

Actuarial Accrued Liability	$461,594,916
Actuarial Value of Assets	288,851,354
Unfunded Actuarial Accrued Liability	$172,743,562

See Table 7 for the detailed development of the Actuarial Accrued Liability and Table 12 for the calculation of the Unfunded Actuarial Accrued Liability.

Other factors influencing the UAAL from year to year include actual experience versus that expected based on the actuarial assumptions (both asset and liability), changes in actuarial assumptions, procedures or methods and changes in benefit provisions. The actual experience measured in this valuation is that which occurred during the prior plan year (FY2011). There was a $16 million experience loss on the actuarial value of assets and a $4 million experience loss on the actuarial accrued liability, largely due to more retirements than expected. The net result of all experience was an increase of $30 million in the UAAL.

Between July 1, 2010 and July 1, 2011 the change in the unfunded actuarial accrued liability for the System was as follows (in millions):

	$ millions
Unfunded Actuarial accrued Liability, July 1, 2010	$142.84
• effect of contributions less than actuarial rate	5.56
• expected increase due to amortization method	3.00
• investment experience	15.63
• liability experience[1]	3.86
• change in actuarial software	2.00
• change in benefit provisions	0
Unfunded Actuarial Accrued Liability, July 1, 2011*	$172.74

[1] Liability gain is about 0.9% of total actuarial accrued liability.

*Figures may not add up due to rounding

An evaluation of the unfunded actuarial accrued liability on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the unfunded actuarial accrued liability and the progress made in its funding is to track the funded status, the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status information, on both an actuarial and a market value basis, is shown below (in millions). The entry age normal method has only been used since the 2008 valuation. Prior to that time, the aggregate method was used, which does not develop an actuarial accrued liability.

	7/1/2008	**7/1/2009**	**7/1/2010**	**7/1/2011**
Using Actuarial Value of Assets:				
Funded Ratio	73.7%	69.4%	67.0%	62.6%
Unfunded Actuarial Accrued Liability (UAAL)	$110	$133	$143	$173
Using Market Value of Assets:				
Funded Ratio	69.7%	53.9%	59.3%	66.9%
Unfunded Actuarial Accrued Liability (UAAL)	$127	$200	$127	$153

Contribution Rates

Under the Entry Age Normal cost method, the actuarial contribution rate consists of:

- a "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date; and
- an "unfunded actuarial accrued liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

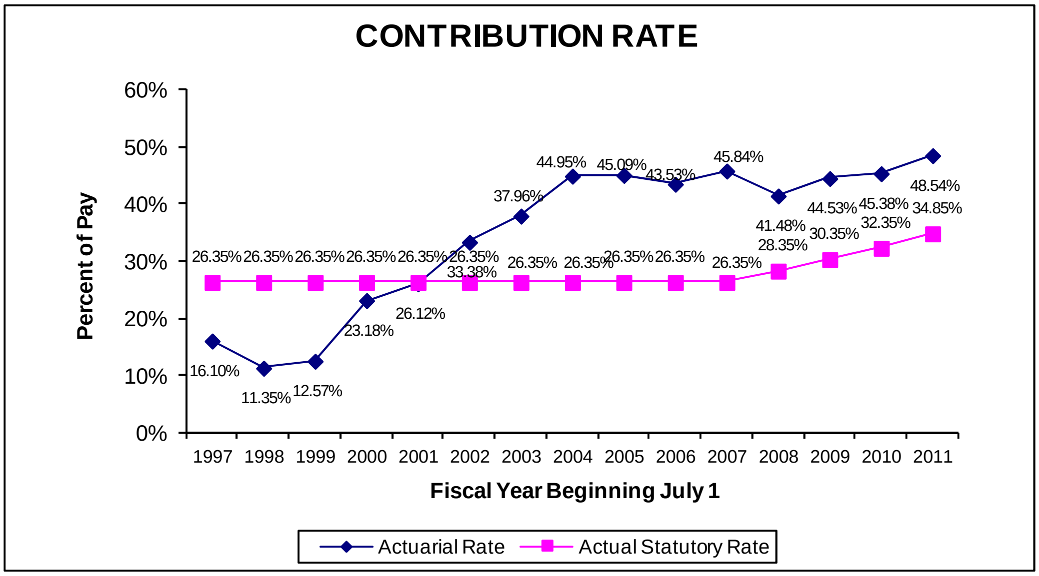
The Board has elected to amortize the unfunded actuarial accrued liability over a closed 30-year period, beginning July 1, 2008, as a level percent of payroll. Twenty-seven (27) years remain as of July 1, 2011.

The total contribution rate for the Plan Year beginning July 1, 2011 is 48.54% of covered payroll. Based on the member contribution rate of 9.85% for FY2012, the State's portion of the actuarial contribution rate is 38.69%. The sources of change are shown in the following table:

	Plan Year Beginning	
	July 1, 2011	**July 1, 2010**
Prior year total contribution rate	45.38%	44.53%
• change due to asset (gains)/losses	2.16%	3.38%
• change due to other actuarial experience	0.63%	(1.37%)
• change due to new assumptions	0.00%	0.00%
• change due to legislative changes in benefits	0.00%	(2.03%)
• change due to change in software	(0.42%)	0.00%
• change due to actual contribution rate lower than actuarial rate	0.78%	0.87%
Current year total actuarial contribution rate	48.54%	45.38%
Members' contribution rate	9.85%	9.35%
State's actuarial contribution rate	38.69%	36.03%

Contributions to the Retirement System are made by both the members and the state. Historically, members have contributed 9.35% of pay, but the rate increased to 9.85% for FY2012 and will increase 0.5% per year for the next three years, reaching an ultimate member contribution rate of 11.35% in FY2015. The state's contribution was 17% of pay for many years, but began increasing 2% per year commencing July 1, 2008. In 2010, the Legislature passed a bill that continues the 2% annual increase with an ultimate contribution rate of 37% in FY2018. It also provides for a supplemental state appropriation of $5 million per year beginning July 1, 2012 and ending June 30 of the fiscal year during which the System's funded ratio is at least 85% The state's contribution rate for FY2012 is 25%. The changes in the state's contribution, along with the increase in the member contribution rate, should address the long term funding concerns if all actuarial assumptions are met in the future.

The following graph shows the total actuarial contribution rate compared to the actual contribution rate in each year.



Over the last decade, actual contributions to the System have been significantly less than the actuarial contribution rate. This, coupled with low investment returns during the same period, has resulted in a decline in the System's funded status. In the short term, the state's contribution is expected to continue to be less than the actuarial contribution rate, which will result in an increase in the unfunded actuarial accrued liability and the actuarial contribution rate. However, over time the increase in the member and state contribution rates, along with the $5 million supplemental contribution annually, is expected to significantly improve the System's funding.

Summary

Although the System's funded ratio remains low (63%), the outlook for the long term health and sustainability of the System is positive. Over the last two years, several factors have contributed to the improvement in the long term funding of the System:

- The fund earned a 14% return in FY2010 and a 24% return for FY2011. These returns, which exceeded the 8% assumed rate of return, offset part of the deferred investment loss from FY2009.

- Legislation passed in the 2010 Session clarified the administration of the flat dollar escalator. The new procedure resulted in smaller escalation amounts being paid in the future. As a result, there was a decrease in the actuarial accrued liability and normal cost rate of the System in the 2010 valuation.

- The 2010 legislation strengthened the funding of the System by increasing member contribution rates from 9.35% to 11.35% over a four year period beginning July 1, 2011 and continuing to increase contributions from the state at 2% per year, to an ultimate rate of 37% (27% prior to the legislation). In addition, the state will make a supplemental contribution of $5 million to the System beginning July 1, 2012 and ending with the fiscal year in which the System reaches a funded ratio of 85%.

These changes to the System result in a much healthier outlook for the System and are expected to move the System toward fully funded status over the long term.

As mentioned above, the System utilizes an asset smoothing method in the valuation process. While this is a common procedure for public retirement systems, it is important to identify the potential impact of the deferred (unrecognized) investment experience. The asset smoothing method impacts only the timing of when the actual market experience on the assets is recognized in the valuation process. The market value of assets now exceeds the actuarial value by about 7%. If asset returns are not significantly below 8% over the next few years, the $20 million of deferred investment gain will be recognized. If the market value of assets were used in the valuation rather than actuarial value, the actuarial contribution rate would have been 45.80% rather than 48.54%.

The employer actuarial contribution rate for fiscal year end June 30, 2012 was 38.69%. The statutory contribution rate was 25% of covered payroll. This difference between the actual and actuarial contribution rate increased the unfunded actuarial accrued liability by about $6 million. To the extent the System does not have investment returns above the assumed rate of 8% or other favorable experience sufficient to offset the contribution shortfall, the unfunded actuarial accrued liability will increase.

The long-term financial health of this retirement system is heavily dependent on two key items: (1) investment returns and (2) contributions to the System. Favorable investment experience for both FY 2010 and FY2011, along with changes made by the 2010 Iowa Legislature to significantly increase the total contributions to the System in the future, have improved the long term funding outlook of the System. While the impact of the increased contribution rates on the System's long term funding will be significant, the improvement in the funded ratio and UAL will not be apparent in the valuation results for many years.

A summary of key data elements and valuation results as of July 1, 2011 and July 1, 2010 are presented on the following page. More detail on each of these elements can be found in the following Sections of this report.

SUMMARY OF PRINCIPAL RESULTS
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

	July 1, 2011 Valuation	July 1, 2010 Valuation	% Change
PARTICIPANT DATA			
Number of			
Active Members	644	643	0.2
Retirees/Beneficiaries/Disabled Members	547	547	0.0
Inactive Vested Members	35	32	9.4
Total Members	1,226	1,222	0.3
Projected Annual Salaries of Active Members	$ 43,493,715	$ 41,954,599	3.7
Average Annual Salary	$ 67,537	$ 65,248	3.5
Average Annual Benefit for Retired Members and Beneficiaries	$ 43,164	$ 40,339	7.0
ASSETS AND LIABILITIES			
Total Actuarial Accrued Liability	$461,594,916	$433,402,131	6.5
Actuarial Value of Assets	288,851,354	290,558,596	(0.6)
Unfunded Actuarial Accrued Liability	172,743,562	142,843,535	20.9
Funded Ratio (Actuarial Value of Assets)	62.6%	67.0%	(6.7)
Market Value of Assets	308,607,733	256,873,773	20.1
Funded Ratio (Market Value of Assets)	66.9%	59.3%	12.8
CONTRIBUTION RATES			
Normal Cost Rate	24.62%	25.29%	(2.7)
Amortization of Unfunded Actuarial Accrued Liability (Level Percent of Payroll)	23.92%	20.09%	19.1
Actuarial Required Contribution Rate	48.54%	45.38%	7.0
Member Contribution Rate	9.85%	9.35%	5.3
Employer Actuarial Required Contribution Rate	38.69%	36.03%	7.4
Statutory State Employer Contribution Rate	25.00%	23.00%	8.7
Contribution Shortfall	13.69%	13.03%	5.0

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is July 1, 2011. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System, which are generally in excess of assets. The actuarial process leads to a method of determining the contributions needed by members and the employer in the future to balance the System assets and liabilities.

Market Value of Assets

The current market value represents the “snapshot” or “cash-out” value of System assets as of the valuation date. In addition, market values of assets provide a basis for measuring investment performance from time to time. At July 1, 2011 the market value of assets for the Retirement System was $308,607,733. Table 1 is a comparison, at market values, of System assets as of July 1, 2010 and July 1, 2011, in total and by investment category. Table 2 summarizes the change in the market value of assets from July 1, 2010 to July 1, 2011.

Actuarial Value of Assets

Neither the market value of assets, representing a “cash-out” value of System assets, nor the book value of assets, representing the cost of investments, may be the best measure of the System’s ongoing ability to meet its obligations. To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. The actuarial value of assets is equal to the market value of assets less a four year phase-in of the excess (shortfall) between expected investment return (based on the actuarial assumption) and actual investment return.

Tables 3 and 4 show the development of the actuarial value of assets (AVA) as of the valuation date.

TABLE 1
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

ANALYSIS OF NET ASSETS AT MARKET VALUE

	July 1, 2011		July 1, 2010	
	Amount	**% of Total**	**Amount**	**% of Total**
Pooled Cash	$ 6,275,428	1.9 %	$ 12,400,167	4.4 %
Receivables	4,896,844	1.5	1,987,715	0.7
Common Stocks	125,102,721	37.4	95,320,247	33.9
Securities on Loan	24,993,534	7.5	23,460,112	8.3
Bonds	160,474,933	48.0	137,340,143	49.0
Real Estate	12,368,202	3.7	10,472,064	3.7
Subtotal	$334,111,662	100.0 %	$280,980,448	100.0 %
Payables	(25,503,929)		(24,106,675)	
NET ASSETS	$308,607,733		$256,873,773	

TABLE 2
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

SUMMARY OF FUND ACTIVITY
(Market Value)

1.	**NET ASSETS ON JULY 1, 2010**	**$**	**256,873,773**
2.	**CONTRIBUTIONS**		
	a. Member Contributions	$	3,844,044
	b. Employer Contributions		9,554,014
	c. Lump Sum Contributions		0
	d. Total Contributions	**$**	**13,398,058**
3.	**BENEFIT PAYMENTS**		
	a. Pension and annuity payments	$	22,253,857
	b. Refunds		0
	c. Total Benefit Payments	**$**	**22,253,857**
4.	**ADMINISTRATIVE EXPENSE**	$	116,987
5.	**INVESTMENT INCOME**	$	60,706,746
6.	**NET ASSETS ON JULY 1, 2011** **(1) + (2d) - (3c) - (4) + (5)**	**$**	**308,607,733**

TABLE 3
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

CALCULATION OF EXCESS (SHORTFALL) INVESTMENT INCOME FOR ACTUARIAL VALUE OF ASSETS

	Plan Year Ending			
	2011	**2010**	**2009**	**2008**
1. Market value of assets, beginning of year	$256,873,773	$233,187,738	$290,306,257	$310,489,530
2. Contributions during year				
a. Member	3,844,044	3,778,295	3,882,107	3,701,009
b. Employer	9,554,014	8,498,523	7,898,356	6,696,538
c. Lump sum payments	0	0	0	0
d. Total	13,398,058	12,276,818	11,780,463	10,397,547
3. Benefits paid during year	22,253,857	21,412,629	20,581,718	19,128,339
4. Refunds paid during year	0	0	9,350	7,393
5. Expected net investment income at 8%				
a. Market value of assets, beginning of year	20,549,902	18,655,019	23,224,501	24,839,162
b. Contributions	525,612	481,625	462,153	407,901
c. Benefits	(873,030)	(840,028)	(807,431)	(750,414)
d. Refunds	0	0	(369)	(290)
e. Total	20,202,485	18,296,616	22,878,854	24,496,359
6. Expected Value of Assets (1) + (2d) - (3) - (4) + (5e)	268,220,459	242,348,543	304,374,506	326,247,704
7. Market value of assets, end of year	308,607,733	256,873,773	233,187,738	290,306,257
8. Excess (shortfall) of investment income for Year (7) - (6)	40,387,274	14,525,230	(71,186,768)	(35,941,447)

TABLE 4
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

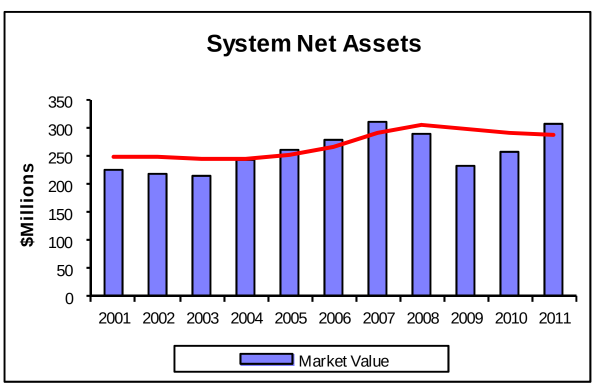
Item	Plan Year Ending June 30 2011	Plan Year Ending June 30 2010
1. Excess (Shortfall) of investment income for current and previous 2 years		
a. Current year	$ 40,387,274	$ 14,525,230
b. One year ago	14,525,230	(71,186,768)
c. Two years ago	(71,186,768)	(35,941,447)
d. Total	(16,274,264)	(92,602,985)
2. Deferral of excess (shortfall) of investment income		
a. Current year (75%)	30,290,456	10,893,922
b. One year ago (50%)	7,262,615	(35,593,384)
c. Two years ago (25%)	(17,796,692)	(8,985,362)
d. Total deferred	19,756,379	(33,684,823)
3. Market value of plan net assets, end of year	308,607,733	256,873,773
4. Actuarial value of plan assets, end of year (3) - (2d)	$288,851,354	$290,558,596
5. Actuarial value divided by market value	93.6%	113.1%

TABLE 5
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

HISTORICAL COMPARISON

Value As of	Market Value of Net Assets	Estimated Rate of Return (MVA)*	Actuarial Value of Assets**	Estimated Rate of Return (AVA)
1-Jul-98	$ 207,649,859	15.3%		
1-Jul-99	219,462,509	6.2%		
1-Jul-00	239,568,583	10.2%		
1-Jul-01	227,402,298	(4.2%)	$249,226,895	4.9%
1-Jul-02	219,373,555	(2.0%)	250,914,077	2.1%
1-Jul-03	215,454,491	0.4%	246,443,660	0.1%
1-Jul-04	242,279,998	15.6%	244,161,533	1.6%
1-Jul-05	260,104,910	10.4%	251,828,813	6.1%
1-Jul-06	278,940,737	10.3%	267,813,445	9.4%
1-Jul-07	310,489,530	14.2%	293,374,805	12.6%
1-Jul-08	290,306,257	(3.8%)	307,291,608	7.8%
1-Jul-09	233,187,738	(16.9%)	300,262,337	0.6%
1-Jul-10	256,873,773	14.4%	290,558,596	(0.2%)
1-Jul-11	308,607,733	24.1%	288,851,354	2.5%

* Net of Expenses.
** A smoothing method for actuarial value of assets was implemented July 1, 2001



In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the System as of the valuation date, July 1, 2011. In this section, the discussion will focus on the commitments of the System, which are referred to as its liabilities.

Table 6 contains an analysis of the actuarial present value of all future benefits (PVFB) for contributing members, inactive members, retirees and their beneficiaries. The analysis is provided for each group.

The liabilities summarized in Table 6 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes measures of both benefits already earned and future benefits expected to be earned. For all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and for the lives of the surviving beneficiaries.

The actuarial assumptions used to determine liabilities are based on the results of an Experience Study prepared in 2007. This set of assumptions, as adopted by the Board, is shown in Appendix C and was first used for the July 1, 2007 valuation. The Board's election to change the actuarial cost method from Aggregate to Entry Age Normal was first reflected in the July 1, 2008 valuation.

Actuarial Liabilities

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

(1) that which is attributable to the past and

(2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial accrued liability". The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost". Table 7 contains the calculation of actuarial accrued liability.

TABLE 6
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

PRESENT VALUE OF FUTURE BENEFITS
AS OF JULY 1, 2011

1.	Active employees	
	a. Retirement Benefit	$279,343,485
	b. Withdrawal Benefit	2,021,989
	c. Pre-Retirement Death Benefit	7,608,457
	d. Disability Benefit	25,536,660
	e. Total	$314,510,591
2.	Inactive Vested Members	3,658,315
3.	Disability Retirees	45,990,006
4.	Retirees and Beneficiaries	219,228,805
5.	Total Present Value of Future Benefits (1e) + (2) + (3) + (4)	$583,387,717

TABLE 7
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

ACTUARIAL ACCRUED LIABILITY
AS OF JULY 1, 2011

1.	Present Value of Future Benefits			
	a.	Retirement Benefit	$279,343,485	
	b.	Withdrawal Benefit	2,021,989	
	c.	Pre-Retirement Death Benefit	7,608,457	
	d.	Disability Benefit	25,536,660	
	e.	Total		$314,510,591
2.	Present Value of Future Normal Costs			
	a.	Retirement Benefit	$ 92,103,890	
	b.	Withdrawal Benefit	2,300,299	
	c.	Pre-Retirement Death Benefit	7,256,014	
	d.	Disability Benefit	20,132,598	
	e.	Total		121,792,801
3.	Present Value of Future Benefits for Inactive Members			268,877,126
4.	Total Actuarial Accrued Liability (1e) - (2e) + 3			$461,594,916
5.	Actuarial Value of Assets			288,851,354
6.	Unfunded Actuarial Accrued Liability			$172,743,562
7.	Funded Ratio *			62.6%

* The market value of assets was $308,607,733. The funded ratio, using the market value of assets, was 66.9%.

TABLE 8
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM
CALCULATION OF ACTUARIAL GAIN/(LOSS)

The actuarial gain/(loss) is comprised of both the liability and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of July 1, 2011.

1.	Expected actuarial accrued liability			
	a.	Actuarial accrued liability at July 1, 2010	$	433,402,131
	b.	Normal cost for year ending June 30, 2011		10,611,576
	c.	Benefit payments for fiscal year ending June 30, 2011		(22,253,857)
	d.	Interest on (a), (b), and (c)		34,215,438
	e.	Change in actuarial software		1,762,035
	f.	Change in plan provisions		0
	g.	Expected actuarial accrued liability at July 1, 2011 (a) + (b) + (c) + (d) + (e) + (f)	$	457,737,323
2.	Actuarial accrued liability at July 1, 2011		$	461,594,916
3.	Actuarial accrued liability gain/(loss) (1g) - (2)		$	(3,857,593)
4.	Expected actuarial value of assets			
	a.	Actuarial value of assets at July 1, 2010	$	290,558,596
	b.	Contributions for fiscal year ending June 30, 2011		13,398,058
	c.	Benefit payments and administrative expenses for fiscal year ending June 30, 2011		(22,370,844)
	d.	Interest on (a), (b), and (c)		22,892,681
	e.	Expected actuarial value of assets at July 1, 2011 (a) + (b) + (c) + (d)	$	304,478,491
5.	Actuarial value of assets at July 1, 2011		$	288,851,354
6.	Actuarial value of assets gain/(loss) (5) - (4e)		$	(15,627,137)
7.	Net actuarial gain/(loss) (3) + (6)		$	(19,484,730)

TABLE 9
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

ACTUARIAL BALANCE SHEET
as of
July 1, 2011

ASSETS

Actuarial value of assets		$288,851,354
Present value of future normal costs		121,792,801
Unfunded actuarial accrued liability		172,743,562
Total Net Assets		$583,387,717

LIABILITIES

Present Value of Future Benefits		
Retired Members and Beneficiaries		$265,218,811
Active Members		
Retirement	$279,343,485	
Death	2,021,989	
Disability	7,608,457	
Termination	25,536,660	
Total		314,510,591
Inactive Vested Members		3,658,315
Total Liabilities		$583,387,717

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 4 and 6 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a fully closed down fund, where no further contributions are anticipated.

In an active system, there will almost always be a difference between the actuarial value of assets and total liabilities. This deficiency has to be made up by future contributions and investment returns. An actuarial valuation sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost and (2) the payment on the unfunded actuarial accrued liability.

The term "fully funded" is often applied to a system in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, systems are not fully funded, either because of past benefit improvements that have not been completely funded and/or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated. Under these circumstances, an unfunded actuarial accrued liability (UAAL) exists.

Description of Rate Components

Effective with the July 1, 2008 valuation, the actuarial cost method used by the System changed from Aggregate to the traditional Entry Age Normal (EAN) – level percent of pay cost method. Under the EAN cost method, the actuarial present value of each member's projected benefit is allocated on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial accrued liability. The unfunded actuarial accrued liability represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued liability is calculated each year and reflects experience gains/losses.

The UAAL is amortized as a level percent of payroll over a closed 30-year period commencing July 1, 2008. Given a stable active workforce, the level percent of payroll amortization method is expected to produce a payment stream that is constant as a percent of covered payroll.

Contribution Rate Summary

The normal cost rate is developed in Table 11. Table 12 develops the contribution rate for amortization of the unfunded actuarial accrued liability. Table 13 develops the total actuarial contribution rate.

TABLE 11
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

NORMAL COST RATE
AS OF JULY 1, 2011

1.	Normal Cost		**% of Pay**
	a. Retirement Benefit	$ 7,883,598	18.62%
	b. Withdrawal Benefit	199,920	0.47%
	c. Pre-Retirement Death Benefit	632,219	1.49%
	d. Disability Benefit	1,708,959	4.04%
	e. Total	$10,424,696	24.62%
2.	Estimated Covered Payroll for the Year	$42,349,997	
3.	Normal Cost Rate [(1e)/(2)]	24.62%	

TABLE 12
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

UNFUNDED ACTUARIAL ACCRUED LIABILITY CONTRIBUTION RATE
AS OF JULY 1, 2011

1.	Actuarial Present Value of Future Benefits	$583,387,717
2.	Actuarial Present Value of Future Normal Costs	121,792,801
3.	Actuarial Accrued Liability (1) -(2)	$461,594,916
4.	Actuarial Value of Assets	288,851,354
5.	Unfunded Actuarial accrued Liability (UAAL) (3) - (4)	$172,743,562
6.	Amortization of UAAL over a closed 30 year period Starting July 1, 2008 (assumed mid-year)*	$ 10,404,513
7.	Total Estimated Payroll for Year Ending June 30, 2012	$ 43,493,715
8.	Amortization as a Percent of Payroll	23.92%

*The UAAL is amortized as a level percent of payroll, assuming payroll increases of 4% per year.

TABLE 13
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

ACTUARIAL CONTRIBUTION RATE

FOR FISCAL YEAR ENDING JUNE 30, 2012

1.	Total Normal Cost Rate	24.62%
2.	Amortization of UAAL	23.92%
3.	Total Actuarial Contribution Rate	48.54%
4.	Member Contribution Rate	9.85%
5.	State Actuarial Contribution Rate (3) - (4)	38.69%

Amortization of UAAL is as a level percent of payroll assuming a 4% annual increase in payroll.

In an effort to enhance the understandability and usefulness of the pension information that is included in the financial reports of pension plans for state and local governments, the Governmental Accounting Standards Board (GASB) issued Statement No. 25 - Financial Reporting for Defined Benefit Pension Plans and Statement No. 27 - Accounting for Pensions by State and Local Governmental Employers.

GASB Statement No. 25 establishes a financial reporting framework for defined benefit plans. In addition to two required statements regarding plan assets, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the plan and historical contribution patterns.

- The Schedule of Funding Progress is not required for plans which use the Aggregate Method to determine the annual required contribution. Since the information shown in the schedule is similar to the information formerly required under GASB Statement No. 5, the Peace Officers' Retirement, Accident, and Disability System has elected to prepare the schedule based on the Projected Unit Credit method. The system uses an asset smoothing method, which was first implemented with the July 1, 2001 valuation.

- The Schedule of Employer Contributions provides historical information about the annual required contribution (ARC) and the percentage of the ARC that was actually contributed. For the Peace Officers' Retirement, Accident and Disability System, the ARC is equal to State's Normal Contribution Rate multiplied by the expected covered payroll for the fiscal year.

GASB Statement No. 27 establishes standards for the measurement, recognition, and display of pension expense and related liabilities. Annual pension cost is measured and disclosed on the accrual basis of accounting. In general, the annual pension cost is equal to the ARC with adjustments for past under-contributions or over-contributions. These adjustments are based on the net pension obligation (NPO) that represents the cumulative difference between the annual pension cost and the actual contributions to the plan. The first adjustment is equal to interest on the NPO which is added to the ARC. The second adjustment is an amortization of the NPO which is deducted from the ARC. Because the system uses the Aggregate method to determine the ARC, the amortization basis is a level percentage of payroll over the average remaining service life of active members.

These statements were adopted by the Peace Officers' Retirement System for the 1996 fiscal year. A transition pension liability (asset) was developed under Statement No. 27 equal to the cumulative difference between the actuarially determined funding requirement and the actual amount contributed for fiscal years 1988 through 1995. As of the adoption date, all outstanding pension liabilities (assets) were adjusted to equal the transition NPO.

TABLE 14
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

SCHEDULE OF FUNDING PROGRESS

In accordance with Statement No. 25 of the Governmental Accounting Standards Board

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)* (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (P/R) (c)	UAAL as a Percentage of Covered P/R [(b-a)/(c)]
7/1/2006	$267,813,495	$358,844,655	$ 91,031,160	74.63%	$ 36,231,639	251.25%
7/1/2007	293,374,805	392,022,773	98,647,968	74.84%	37,268,060	264.70%
7/1/2008	307,193,608	417,176,049	109,982,441	73.64%	40,829,801	269.37%
7/1/2009	300,262,337	432,894,495	132,632,158	69.36%	41,862,395	316.83%
7/1/2010	290,558,596	433,402,131	142,843,535	67.04%	41,954,599	340.47%
7/1/2011	288,851,354	461,594,916	172,743,562	62.58%	43,493,715	397.17%

* Prior to 7/1/08 the Aggregate method, which does not directly develop an actuarial accrued liability, was used to determine the actuarial required contribution. The actuarial accrued liability using the Projected Unit Credit Cost method was reported for those years. Effective 7/1/08, the Entry Age Normal cost method was used and the actuarial accrued liability under that method is reported

Note: Results for valuations prior to 2010 were prepared by the prior actuary

TABLE 15
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

SCHEDULE OF EMPLOYER CONTRIBUTIONS

In accordance with Statement No. 25 of the Governmental Accounting Standards Board

Fiscal Year Ending	Annual Required Contribution (a)	Total Employer Contribution (b)	Percentage of ARC Contribution (b/a)
6/30/2009	$13,118,615	$7,898,356	60.21%
6/30/2010	14,727,191	8,498,523	57.71%
6/30/2011	15,116,242	9,554,014	63.20%

Notes to the Required Schedules:

1. The assets are shown at actuarial (smoothed) value.
2. Economic assumptions are as follows: Investment return rate of 8.00%
Salary increase rate varies from 6.75% to 4.75%, based on years of service.
Post-retirement benefit increases are based on expected payroll growth and provisions of the law.
3. Amortization of the unfunded actuarial liability is over a 30-year closed period starting July 1, 2008

Note: Results for valuations prior to 2010 were prepared by the prior actuary

TABLE 16
IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

Development of the Net Pension Obligation

In Accordance with Statement No. 27 of the Governmental Accounting Standards Board

Fiscal Year:	2003	2004	2005	2006	2007
Assumptions and Method:					
Interest Rate	8.00%	8.00%	8.00%	8.00%	8.00%
Wage Inflation	4.00%	4.00%	4.00%	4.00%	4.00%
Amortization Period (years)	21	17	17	17	17
Cost Method	Aggregate	Aggregate	Aggregate	Aggregate	Aggregate
Annual Pension Cost:					
Annual Required Contribution (ARC)	$7,883,879	$9,446,823	$11,577,021	$11,914,592	$12,383,974
Interest on NPO	(1,399,643)	(1,216,369)	(899,356)	(407,525)	80,714
Adjustment to ARC	1,346,805	1,234,931	913,080	413,744	(81,946)
Annual Pension Cost	7,831,041	9,465,385	11,590,745	11,920,811	12,382,742
Contributions for the Year:	5,540,116	5,502,718	5,442,868	5,817,819	6,262,951
Net Pension Obligation (NPO):					
NPO at beginning of year	(17,495,537)	(15,204,612)	(11,241,945)	(5,094,068)	1,008,924
Annual Pension Cost for year	7,831,041	9,465,385	11,590,745	11,920,811	12,382,742
Contribution for year	(5,540,116)	(5,502,718)	(5,442,868)	(5,817,819)	(6,262,951)
NPO at end of year	(15,204,612)	(11,241,945)	(5,094,068)	1,008,924	7,128,715

Fiscal Year:	2008	2009	2010	2011	2012
Assumptions and Method:					
Interest Rate	8.00%	8.00%	8.00%	8.00%	8.00%
Wage Inflation	4.00%	4.00%	4.00%	4.00%	4.00%
Amortization Period (years)	16	30	29	28	27
Cost Method	Aggregate	Aggregate	EAN	EAN	EAN
Annual Pension Cost:					
Annual Required Contribution (ARC)	$13,599,115	$13,118,615	$14,727,191	$15,116,242	$16,826,611
Interest on NPO	570,297	1,119,738	1,563,340	2,096,254	2,585,260
Adjustment to ARC	(604,863)	(794,969)	(1,130,590)	(1,545,902)	(1,946,409)
Annual Pension Cost	13,564,549	13,443,384	15,159,941	15,666,594	17,465,462
Contributions for the Year:	6,696,538	7,898,356	8,498,523	9,554,014	*
Net Pension Obligation (NPO):					
NPO at beginning of year	7,128,715	13,996,726	19,541,754	26,203,172	32,315,752
Annual Pension Cost for year	13,564,549	13,443,384	15,159,941	15,666,594	17,465,462
Contribution for year	(6,696,538)	(7,898,356)	(8,498,523)	(9,554,014)	*
NPO at end of year	13,996,726	19,541,754	26,203,172	32,315,752	*

* Will not be determined until the end of Fiscal Year 2012

Note: Results for valuations prior to 2010 were prepared by the prior actuary

APPENDIX A

SYSTEM MEMBERSHIP

INFORMATION

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

AGE AND SERVICE DISTRIBUTION AS OF JULY 1, 2011 FOR ACTIVE PARTICIPANTS

Males and Females

Years of Service

Age	0 to 4 No.	0 to 4 Avg. Salary	5 to 9 No.	5 to 9 Avg. Salary	10 to 14 No.	10 to 14 Avg. Salary	15 to 19 No.	15 to 19 Avg. Salary	20 to 24 No.	20 to 24 Avg. Salary	25 to 29 No.	25 to 29 Avg. Salary	30 to 34 No.	30 to 34 Avg. Salary	35 to 39 No.	35 to 39 Avg. Salary	40 & over No.	40 & over Avg. Salary	Total No.	Total Avg. Salary
Under 25	18	42,542	2	47,070	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	42,995
25-29	42	46,458	40	51,444	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	48,890
30-34	22	48,890	44	53,168	22	62,712	0	0	0	0	0	0	0	0	0	0	0	0	88	54,485
35-39	7	52,264	11	54,001	76	67,678	33	73,572	0	0	0	0	0	0	0	0	0	0	127	67,175
40-44	2	48,100	6	54,174	22	67,081	87	76,657	7	77,396	0	0	0	0	0	0	0	0	124	73,451
45-49	1	48,568	0	0	5	69,049	39	77,042	56	78,168	9	82,096	1	78,888	0	0	0	0	111	77,420
50-54	0	0	0	0	0	0	7	72,942	23	80,173	43	85,389	6	82,961	0	0	0	0	79	82,583
55-59	0	0	0	0	0	0	0	0	3	78,888	5	80,639	3	91,084	0	0	0	0	11	83,010
60-64	0	0	0	0	0	0	0	0	0	0	0	0	1	80,094	0	0	1	80,094	2	80,094
65-69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70 & over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	92	46,774	103	52,528	125	66,754	166	75,978	89	78,650	57	84,452	11	84,545	0	0	1	80,094	644	67,537

Average Age: 39.5
Average Years of Service: 14.0

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

ANALYSIS OF INACTIVE MEMBERS
As of July 1, 2011
Males and Females

Number of Participants

Age	Service Retirement	Accidental Disability	Ordinary Disability	Vested Retirement	Child Beneficiary	Contingent Beneficiary	Inactive Vested	Total
Under 40	0	2	0	0	7	0	12	21
40 to 44	0	3	0	0	0	0	10	13
45 to 49	0	5	1	0	0	1	7	14
50 to 54	0	2	0	0	0	3	6	11
55 to 59	42	7	2	2	0	7	0	60
60 to 64	68	17	3	5	0	6	0	99
65 to 69	67	17	2	6	0	17	0	109
70 to 74	49	14	1	11	0	16	0	91
75 to 79	46	9	2	1	0	16	0	74
80 to 84	23	3	1	3	0	18	0	48
85 to 89	17	1	0	1	0	14	0	33
90 to 94	1	0	0	0	0	4	0	5
95 to 99	1	0	0	0	0	3	0	4
100 & over	0	0	0	0	0	0	0	0
Totals	314	80	12	29	7	105	35	582

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM

ANALYSIS OF INACTIVE MEMBERS
As of July 1, 2011
Males and Females

Average Annual Benefits of Participants

Age	Service Retirement	Accidental Disability	Ordinary Disability	Vested Retirement	Child Beneficiary	Contingent Beneficiary	Inactive Vested
Under 40	0	35,850	0	0	6,819	0	10,614
40 to 44	0	39,292	0	0	0	0	15,635
45 to 49	0	38,818	34,766	0	0	19,688	26,387
50 to 54	0	44,286	0	0	0	19,119	24,905
55 to 59	66,536	44,068	46,136	24,913	0	31,726	0
60 to 64	62,414	45,181	39,289	21,021	0	22,894	0
65 to 69	53,602	44,456	43,774	14,797	0	21,727	0
70 to 74	45,669	41,184	37,603	20,027	0	19,418	0
75 to 79	41,417	37,539	31,058	28,479	0	21,685	0
80 to 84	37,330	38,584	30,217	16,602	0	20,554	0
85 to 89	34,516	33,814	0	21,203	0	20,251	0
90 to 94	32,780	0	0	0	0	21,255	0
95 to 99	32,127	0	0	0	0	21,866	0
100 & over	0	0	0	0	0	0	0
Totals	51,857	42,107	38,532	19,431	6,819	21,596	17,653

Reconciliation of Member Status
From July 1, 2010 to July 1, 2011

	Active Members	Members & Beneficiaries Receiving Benefits	Former Members with Deferred Benefits	Children Receiving Benefits	Total
Members as of July 1, 2010	643	538	32	9	1,222
Began Receiving Benefits	(12)	26	(1)	0	13
Terminated Without Further Benefit Eligibility	(4)	0	(2)	0	(6)
Terminated With Benefit Eligibility	(6)	0	6	0	0
Returned to Active Status	0	0	0	0	0
Deceased	0	(23)	0	0	(23)
Benefits Ended	0	0	0	(3)	(3)
Newly Hired	24	0	0	0	24
Adjustments	(1)	(1)	0	1	(1)
Members as of July 1, 2011	644	540	35	7	1,226

APPENDIX B

SUMMARY OF PLAN PROVISIONS

Chapter 97A of the Iowa code sets out the benefit provisions of the Iowa Peace Officers' Retirement, Accident and Disability System, which are briefly summarized as follows:

Retirement Benefit

Eligibility Age 55 with 22 years of service.

Monthly Annuity The sum of (1) and (2):

(1)
a. For retirement prior to July 1, 1990, 50% of average final compensation at retirement. Average final compensation equals average of highest three years of compensation.

b. For retirement after June 30, 1990 and before July 1, 1992, 54% of average final compensation at retirement.

c. For retirement after June 30, 1992 and before July 1, 1993, 56% of average final compensation at retirement.

d. For retirement after June 30, 1993 and before July 1, 1994, 58% of average final compensation at retirement.

e. For retirement after June 30, 1994, and before July 1, 2000, 60% of average final compensation at retirement.

f. For retirement after July 1, 2000, 60.5% of average final compensation at retirement.

(2) For members who do not withdraw member contributions:

a. For retirement after June 30, 1990 and before July 1, 1991, 0.3% of average final compensation for each year of service over 22 years (up to 8 years). Service after age 55 is excluded.

b. For retirement after June 30, 1991 and before October 16, 1992, 0.6% of average final compensation for each year of service over 22 years (up to 8 years). Service after age 55 is excluded.

c. For retirement after October 15, 1992 and before July 1, 1996, 0.6% of average final compensation for each year of service over 22 years (up to 8 years).

d. For retirement after June 30, 1996, 1.5% of average final compensation for each year of service over 22 years (up to 8 years).

e. For retirement after June 30, 1998, 1.5% of average final compensation for each year of service over 22 years (up to 10 years).

f. For retirement after June 30, 2000, 2.75% of average final compensation for each year of service over 22 years (up to 10 years).

Early Retirement Benefit

Eligibility — Effective July 1, 1996, age 50 (but not age 55) with 22 years of service.

Monthly Annuity — The benefit provided as a retirement benefit actuarially reduced for commencement prior to age 55.

Deferred Vested Benefit

Eligibility — Four years of service.

Monthly Annuity — At age 55. The benefit provided as a retirement benefit at termination times a service ratio. The service ratio equals service at termination divided by 22 (not greater than 1.0).

Ordinary Disability Benefit

Eligibility — None.

Benefit — (1) If service at disability is greater than or equal to 5 years, 50% of average final compensation at disability.

(2) If service at disability is greater than or equal to 22 years, the greater of (1) or the benefit amount calculated under a service retirement. Effective July 1, 1998, the service requirement does not apply.

(3) If service at disability is less than 5 years, 25% of average final compensation at disability.

Accidental Disability Benefit

Eligibility None.

Benefit

(1) For retirement prior to July 1, 1990, 66-2/3% of average final compensation at disability.

(2) For retirement after June 30, 1990, 60% of average final compensation at disability. If the service amount at disability is greater than or equal to 22 years, the greater of 60% of average final compensation at disability or the benefit amount calculated under a service retirement.

Ordinary Death Benefit

Eligibility

For member in service: None.
For member not in service: Four years of service.

Benefit

(1) A lump sum equal to 50% of compensation during the last year of employment, or

(2) A pension based on 40% of average final compensation but not less than 25% of compensation paid to an active member having the rank of senior patrol officer of the state patrol. For members not in service, benefit is multiplied by the ratio of service at termination to 22 years (not greater than 1.0).

(3) Additional benefit for members in service of 6% of compensation payable to an active member having the rank of senior patrol officer of the state patrol for each child.

Payment Date

(1) For members in service: Immediately upon death of member.

(2) For member not in service: Payable when member would have been age 55. If there are children of the member, payable commencing at the member's death until children reach age 18 or 22. Pension resumes when member would have been age 55.

<u>Accidental Death Benefit</u>

Eligibility In actual performance of duty.

Benefit

(1) 50% of average final compensation payable to surviving spouse, children or dependent parents.

(2) If there is not surviving spouse, children or dependent parents, or if accidental death occurs while not in the actual performance of duty, an Ordinary Death Benefit is payable.

(3) Additional benefit for members in service of 6% of compensation payable to an active member having the rank of senior patrol officer of the state patrol, for each child.

(4) If the death meets specified criteria, a lump sum of $100,000 payable to surviving spouse, children, dependent parents, or estate.

<u>Death After Retirement</u>

Benefit

(1) 50% of retirement allowance of retired member but not less than 25% of compensation paid to an active member having the rank of senior patrol officer of the state patrol.

(2) Additional benefit of 6% of compensation payable to an active member having the rank of senior patrol officer of the state patrol, for each child.

Adjustments to Pensions

Each July 1 and January 1, if applicable, the following adjustments are made: Monthly earnable compensation payable to an active member, of the same rank and position in the salary scale as was held by the retired or deceased member at the time of the member's retirement or death, for July of the current year less that of the preceding July, times the following percentages:

(1) 40% for members receiving a service retirement allowance and for beneficiaries receiving an accidental death benefit.

(2) 40% for members with five or more years of membership who are receiving an ordinary disability benefit.

(3) 40% for member receiving an accidental disability benefit.

(4) 24% for members with less than five years of membership who are receiving an ordinary disability benefit and for beneficiaries receiving an ordinary death benefit.

(5) 50% of the amount which would have been added to the benefit of the retired member, for surviving spouses, but not less than 25% of the monthly earnable compensation paid to an active member having the rank of senior patrol officer.

Additionally, the following amounts will be added to a member or beneficiary monthly pension as follows:

Years Since Retired*	Amount
0-4	$15
5-9	20
10-14	25
15-19	30
20 or more	35

*Measured in whole years.

There was a change in the way the flat escalator was applied effective July 1, 2010. Prior to 2010, the amount increased for each year after retirement.

Surviving children's pensions are adjusted each July to equal 6% of monthly earnable compensation payable to an active member having the rank of senior patrol officer of the state patrol.

Member Contributions

The following percentage of earnable compensation will be paid as member contributions:

Period	Member Contribution Rate
January 1, 1995 - June 30, 1995	8.35%
July 1, 1995 forward	9.35%
July 1, 2011 – June 30, 2012	9.85%
July1, 2012 – June 30, 2013	10.35%
July1, 2013 – June 30, 2014	10.85%
July 1, 2014 forward	11.35%

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Withdrawal of Member Contributions

Effective July 1, 1990, members who terminate service, other than by death or disability, can elect to withdraw their accumulated contributions with interest in lieu of any benefits to which the member may be entitled from the System.

Transfers With Statewide Fire and Police Retirement System

Beginning July 1, 1996, vested members of an eligible retirement system who terminate employment and, within one year, commences covered employment under another eligible retirement system, may elect to transfer the average accrued benefit or the refund liability earned from the former system to the current system. Once such transfer is completed, service under the former system shall be treated as membership service under the current system.

APPENDIX C

ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Cost Method

Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding.

Sometimes called "funding method," this is a particular technique used by actuaries for establishing the amount of the annual actuarial cost of pension System benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the System is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each member would have been eligible to join the System if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the System.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The **Unfunded Actuarial Accrued Liability** is the excess of the actuarial accrued liability over the actuarial value of System assets on the valuation date.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

Actuarial Assumptions

Interest Rate:	8% per year.
Price Inflation:	3.5% per year.
Payroll Growth:	4.0% per year, including price inflation.
Active Members:	
1. Ordinary death rate	RP-2000 Mortality Table for Employees with Generational Projection.
2. Accidental death rate	8.5 deaths per 10,000 exposed for one year.

3. Disability rates

Age	Accidental Disability	Ordinary Disability
22	0.14%	0.09%
27	0.15%	0.10%
32	0.20%	0.13%
37	0.24%	0.16%
42	0.29%	0.19%
47	0.36%	0.24%
52	0.46%	0.31%

4. Withdrawal rate

The following table is used:

Service	Rate
0	5.0%
1-2	3.5%
3	3.0%
4	2.5%
5	2.0%
6	1.5%
7-14	1.0%
15-19	0.5%
20	0.0%

6. Retirement age

Age	**Probability of Retirement**
55	45%
56	30%
57-59	20%
60-61	50%
62	100%

7. Salary scale

Year	**Increase**
0-5	6.75%
6	6.50%
7	6.00%
8-24	5.25%
25+	4.75%

8. Post-retirement adjustments — Same as for retired members.

Retired Members and Other Beneficiaries:

1.	Mortality rate - Service retirees	Service retirements and beneficiaries: RP-2000 Mortality Table for Healthy Annuitants with Generational Projection Mortality Tables - Male and Female.
2.	Mortality rate - Disabled retirees	Disability retirements: RP-2000 Mortality Table for Healthy Annuitants with Generational Projection with a 5 year age set forward.
3.	Annual readjustment of pensions	Wages for the same rank are assumed to increase 4%.

Dependency Ratios:

1.	Ordinary death benefit	Alternate benefits payable to widow and minor children in 90% of cases.
2.	Pension to spouse and children of deceased pensioned member	In 90% of cases.

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM CERTIFICATION

We have prepared an actuarial valuation of the Iowa Peace Officers' Retirement, Accident and Disability System as of July 1, 2011, for the fiscal year ending June 30, 2012. The results of the valuation are set forth in this addendum, which reflects the benefit provisions in effect on July 1, 2011.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete, or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

The results in this Addendum have been prepared for the sole purpose of providing the information required under Chapter 97 D.5 of the Iowa code. Calculations are based on the following prescribed methods:

Actuarial cost method: Entry Age Normal
Amortization method: Level percent of payroll
Amortization period: 30 years, open period

All other assumptions, methodologies, and System provisions used are consistent with those used in the regular July 1, 2011 valuation for the Iowa Peace Officers' Retirement, Accident and Disability System.

The results shown in this Addendum may not be consistent with those in the regular July 1, 2011 valuation. The July 1, 2011 valuation results were determined in accordance with generally accepted actuarial principles and practices that are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying opinion and supporting recommendations of the American Academy of Actuaries. The results shown in this Addendum are not necessarily based on the methodologies adopted by the System.

We are available to answer any questions on the material contained in this report, or to provide explanations or further details as may be appropriate.

The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Patrice Beckham

October 10, 2011

Patrice A. Beckham, FSA, EA, FCA, MAAA — Date

Brent A. Banister

October 10, 2011

Brent A. Banister, PhD, FSA, EA, FCA, MAAA — Date

IOWA PEACE OFFICERS' RETIREMENT, ACCIDENT AND DISABILITY SYSTEM
SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED METHODOLOGY

This addendum report has been prepared to present the results of a valuation of the Iowa Peace Officers' Retirement, Accident and Disability System as of July 1, 2011, based on the prescribed methodology under current statutes and regulations issued thereunder.

The unfunded actuarial accrued liability has been amortized as a level percent of payroll over 30 years. The payroll growth assumption used was 4%.

A summary of principal valuation results from the current and the prior valuation follows.

	Actuarial Valuation as of	
	July 1, 2011	**July 1, 2010**
Summary of Costs		
Normal cost	24.62%	25.37%
UAAL amortization	22.56%	19.69%
Total	47.18%	45.06%
Less Employee Contribution Rate	(9.85%)	(9.35%)
State Required Contribution	37.33%	35.71%
Funded Status		
Actuarial accrued liability	$461,594,916	$436,032,891
Actuarial value of assets	288,851,354	290,558,596
Unfunded actuarial accrued liability	$172,743,562	$145,474,295
Funded Ratio	62.58%	66.64%
Asset Values		
Market value of assets (MVA)	$308,607,733	$256,873,773
Actuarial value of assets (AVA)	288,851,354	290,558,596
MVA/AVA	106.84%	88.41%